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THE EVOLUTION OF SYSTEMS OF
DEFENSE IN PALESTINE

A PART OF A DISSERTATION SUB-
MITTED TO THE FACULTY OF THE
DIVISION OF THE HUMANITIES IN
CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

Department of Oriental Languages and Literatures

1937

By
LYNN HARPER WOOD

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ARCHAEOLOGY AND THE BIBLE—THE EVOLUTION OF SYSTEMS OF DEFENSE IN PALESTINE

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IN dealing with a subject apparently so cold and forbidding as fortifications, one might be forgiven for feeling that it could not reflect to any great extent the ebb and tide of the political, social, and economic fortunes of a people like the Israelites, who attempted to gather together the threads of disorganization, build a nation with centralized control, and give a great heritage to the world. Yet man's life and thought has always been intimately associated with the necessary provision for his protection, and it is not surprising to find that the evolution of the systems of defense in Palestine reflects, at least to some extent, the same evolution of man's cultural processes in this national corridor as has been revealed through other phases of historical and archaeological findings.

Archaeology has demonstrated that early life in Palestine reaches back into the various Stone Ages,¹ with Troglodytes uniformly inhabiting the uplands. In some isolated sectors, however, as Tuleilat el-Ghassul, Jericho, or Beth-shan,² occupancy was partially or wholly above ground from the very beginning. It has been difficult to reconstruct the culture of these early times because of limited excavation of the Stone Age sites and because caves once used as dwellings were later converted into tombs or cisterns. However, it seems that these early inhabitants, like the cliff dwellers in the Mesa Verde district of Colorado and Arizona, depended not so much on exterior forti-

fications as on properly constructed caves, to give them needed protection. One cannot study the complexity of chambers, the multiplicity of entrances, the various means of communication between rooms, and the methods of proper ventilation and water supply, as well illustrated in the caves at Gezer,³ without feeling that the Neolithic dweller used a great deal of ingenuity and forethought in the gradual creation of protective measures for his family.

In at least one instance a wall has been erected between a cave entrance and a nearby opening into an adjoining chamber, while in other cases niches or bays were cut into the wall;⁴ all of which in the darkness of the cave would furnish additional protection. Perhaps it was in such a niche as this in the cave of Engedi that David was pictured as standing as he clipped a bit of Saul's garment. In one cave complex, Gezer 28 II, there are nine entrances, both overhead and lateral, at least three "squeeze" passages leading from one room to another, and a seventy-five foot tunnel connecting two parts of the complex constructed on two different levels and joined by a vertical hole. Directly in front of several entrances are cistern openings, that, for an intruder ignorant of the cave plan, would make an efficient trap. They would also greatly aid in keeping the cave dry in time of storm and in providing proper water supply for the home. In some caves a ladder was required to reach the floor from the overhead entrance.⁵

That which excavations revealed as fact, the various Biblical authors have mentioned in re-

¹ R. Neuville, "Additions à la liste des stations préhistoriques de Palestine et Transjordanie," *JPOS*, IX (1929), 114-121; G. G. MacCurdy, "Prehistoric Research in the Near East," *PAPS*, LXXII (1933), 121-135; G. M. FitzGerald, "Some Stone Age Sites Investigated," *PEFQS* (1930), pp. 85-90; Dorothy Garrod, "Excavations at the Wady el-Mughara," *PEFQS* (1934), pp. 85-89.

² A. Mallon, "Les fouilles de l'Institut Biblique Pontifical dans la vallée du Jourdain," *Biblica*, XI (1930), 1-21; XII (1931), 257-270; XIII (1932), 273-283; J. P. Droop, "Jericho, City and Necropolis," *AAA*, XXII (1935), 163-168; FitzGerald, "Excavations at Beth-shan, in 1933," *PEFQS* (1933), pp. 122-131.

³ R. A. S. Macalister, *The Excavation of Gezer* (3 vols.; London: John Murray, (1912), I, 87-92, 112-141, fig. 38; III, pl. XIV.

⁴ *Ibid.*, I, 102.

⁵ R. A. S. Macalister and J. G. Duncan, "Excavations on the Hill of Ophel, Jerusalem," *AnPEF*, IV (1925-26), 21-25; Duncan, *Digging Up Biblical History* (2 vols.; London: Society for Promoting Christian Knowledge, 1931), I, 14-17.

⁶ Gen. 19:30.

peated instances. Lot used a cave as a home.⁶ David hid in the cave of Adullam, and outlaws attached themselves to him there.⁷ Obadiah hid fifty prophets in a cave for fear of Jezebel.⁸ After using it for a home and a fortress the Troglodyte, like Abram, also used it for a tomb.⁹ His various methods of cave design stood him in good stead and again and again man has returned to subterranean cavities and winding passages for a safe retreat, as witness the dugouts and bomb shelters of the world war.

Sometime about the middle of the third millennium a radical change came over the lives of men dwelling in this rocky bridge-head between Egypt and the Euphrates; just how, no one as yet knows. We have, however, records of the movements of armies across this country, of the ingress of new peoples, and of commercial relations between Egypt and other nations that resulted in the crossing of Palestine by caravans and the establishing of trade routes.¹⁰

At least one of the results of this activity was a definite movement to construct cities above ground, though for a few generations some communities apparently gave little

thought to fortifying their cities against foreign attack.¹¹ Where fortifications were built, however, there is evidence that the Troglodyte's skill in rock cutting had not been forgotten. In Tell el-Ajjul a tremendous fosse, part of which was cut in the soft rock, encircled the city on three sides for a distance of four thousand feet. On a causeway on the eastern side of the city openings to two tunnels were found, leading away some distance to sunken pits which Clarke thinks were part of the defense system.¹² Macalister found further evidence of rock cutting in his "Zedek Valley" just to the north of the Jebusite ruins on the hill of Ophel in Jerusalem,¹³ as well as the famous water passage at Gezer, where a fine tunnel led down through solid rock to an underground spring rising in a natural cave some ninety-four feet below the surface of the rock.¹⁴

The uncertainty of the times so far as communal protection was concerned is well illustrated by a house found in Debir in stratum G. It had a large rectangular courtyard, three sides of which were outside walls. In one of these walls was an outside door furnished with a heavy eight-inch door socket, still in situ.¹⁵ The house proper, on the fourth side opposite the entrance, contained living and perhaps storage rooms. Pottery remains dated this stratum in the nineteenth century when there was still no national organization, each town and oft-times each family being responsible for its own welfare.

The early walls were faced both inside and out with megalithic blocks of stone, but the center was regularly filled with earth and rubble, well tamped.¹⁶ At et-Tell (Ai?) the walls

⁶ I Sam. 12: 1-2.

⁷ I Kings 18: 4.

⁸ Gen. 23: 9.

⁹ Compare J. H. Breasted, *A History of Egypt* (New York: Chas. Scribner's Sons, 1906), pp. 48-144; with I. M. Price, *Great Cylinder Inscriptions of Gudea* (2d ed.; 2 vols.; Leipzig: J. C. Hinrichs, 1927), p. 62; W. F. Petrie, *Deshasheh* (London: Egypt Exploration Fund, 1898), pp. 5-6, pl. IV; W. F. Albright, "Palestine in the Earliest Historical Period," *JPOS*, XV (1935), 215-216; N. Glueck, "Explorations in Eastern Palestine I," *AASOR*, XIV (1934), 81; H. Frankfort, "Egypt and Syria in the First Intermediate Period," *JEA*, XII (1926), 80-99; Albright, "The Egyptian Empire in Asia in the Twenty-first Century," *JPOS*, VIII (1928), 223-256; and A. H. Gardiner, "The Tomb of a Much-traveled Theban Official," *JEA*, IV (1917), 28 f.

¹¹ Sites that were later strongly fortified as Megiddo; G. Schumacher, *Tell el Mutesellim* (2 vols. in 3; Leipzig: R. Haupt, 1906), Band I, pp. 11-12; and Lachish; J. L. Starkey, "Excavations in Palestine, Tell ed-Duweir," *QDAP*, IV (1935), 206-207; at first appeared to give little thought to a city wall. At Debir it was not until the fourth stratum from the bottom was reached that evidences of fortifications were found. Albright, "Third Campaign at Tell Beit Mirsim," *BASOR*, No. 39 (1930), p. 3. In Beth-shan no defenses were found in the lowest stratum, but plano-convex brick were found that were quite similar to those in contemporary levels at Nippur. FitzGerald, "Excavations at Beth-shan in 1933," *PEFQS* (1934), pp. 123-124.

¹² Petrie, *Ancient Gaza I* (4 vols.; London: British School of Archaeology in Egypt, 1931-34), I, 11; II, 1; pl. LI; N. P. Clarke, "Ancient Defenses of Tell el-Ajjul," *Ancient Egypt* (1932), pp. 10-12.

¹³ Macalister, "Report on Excavation of Eastern Hill of Jerusalem," *PEFQS* (1934), pp. 57-58.

¹⁴ Macalister, *Excavation of Gezer*, I, 256-265; III, pl. LII.

¹⁵ M. G. Kyle, *Excavating Kirjath-sepher's Ten Cities* (Grand Rapids: Eerdmans, 1934), p. 197.

varied greatly in thickness, and on the east some indication of a double wall was found.¹⁷ Most of the walls, at least in the early part, of this period were not reinforced by towers or buttresses. It is probable, however, that before the Hyksos entered the country such addition to the fortification was introduced. The Gezer wall was found to have been strengthened by towers at approximate ninety-foot intervals, and a crude representation of such reinforcements is found on the Deshasheh relief.¹⁸ Inside an outline of the city plan are depicted scenes from a battle where women as well as men are defending the city. Outside, men are using pikes to undermine the wall, while inside, a man on his knees motions for quiet while he listens to the sounds from without. The use of ladders, bows, slings, and battle axes is also illustrated.

Gates from this late EB and early MB period are scarce. Gezer is at present the only site where such a gate has been uncovered. Though the wall itself was of stone, the gate was a straight entrance some forty-two feet long by nine feet wide between two brick towers. A six-foot stone dado paneling almost two feet thick lined either side of the passage, the spaces between the huge blocks of stone being filled in with rough masonry. No sign of a door socket was found nor evidence as to how the passage was roofed.¹⁹ By way of comparison the northeast gate of Nippur²⁰ does not seem to be so well guarded, although it does have a large moat or ship canal that offers a deterrent to attack.

Thus, a study of the fortifications of these centuries shows not only increased occupancy

above ground and an acceptance of civic plans from other countries, but also an adaptation of these plans to the special needs in Palestine, reflecting a virile though perhaps primitive culture.

At the time of the great Hyksos incursion in the eighteenth century the ordinary fortified town with its crowded quarters and narrow streets proved inadequate for the needs of these warriors who introduced the use of the horse and chariot. Two general types of fortification were used by these invaders during their control of Egypt, Palestine and Syria. The first expressed itself in the form of a mighty encampment, sometimes a thousand yards square, surrounded by earth ramparts fifty to seventy-five feet high, with sides so steep no attacking army could easily pass over them. Such sites are found at Hazor in northern Galilee or Askalon in the southern part of Palestine.²¹ In Hazor advantage was taken of two existing wadies and the space between them was protected by ramparts while in Askalon the sea formed the west side and the earth fortifications were rather semicircular in plan. Contemporary fortification similar to these in type were found outside Palestine in such places as Carchemish,²² Qatna,²³ and Tell el-Yehudiyeh.²⁴

The second type expressed itself in the form of a stone revetment placed at the base of the city wall to make impossible the close approach of engines of war. These revetments were plastered with a hard coat of clay that made the dislodgment of individual stones very difficult and created an appearance similar to the outside of a plastered earth rampart. This type was clearly a modification of the rampart,

¹⁷ S. Yeivin, "Masonry of the EB People," *PEFQS* (1934), pp. 189-191, feels that this type of masonry might have been invented by a people accustomed to building in mud brick. At least it would be perfectly natural for those constructing these fortifications to gain as much information as possible from the methods of their neighbors in other lands.

¹⁸ J. Marquet-Krause, "Les fouilles de et-Tell en 1934," *Syria*, XVI (1935), pl. L.

¹⁹ Petrie, *Deshasheh*, pp. 5-6, pl. IV.

²⁰ Macalister, *Excavation of Gezer*, III, 242-243; pls. I-II.

²¹ C. S. Fisher, *Excavations at Nippur* (Philadelphia: University of Pennsylvania Press, 1905), pp. 21-24.

²² J. Garstang, "The Site of Hazor," *AAA*, XIV, (1927), 37; *Joshua and Judges* (London: Constable & Co., 1931), pp. 183-186; 359.

²³ C. L. Woolley and T. E. Lawrence, *Carchemish* (2 vols.; London: British Museum, 1921), II, 38 f.

²⁴ Comte du M. du Buisson, "Les ruines d'el-Mishrife," *Syria*, VII (1926), 289-325, pls. XLIX-LI; VIII (1927), 13-33. Albright was among the first to suggest its connection with the Hyksos. See *BASOR*, No. 21 (1926), p. 60.

²⁵ Petrie, *Hyksos and Israelite Cities* (London: University College School of Archaeology, 1906), pp. 2-9, pl. II.

and the fact of its being associated with Hyksos pottery, introduced for the first time in this period, permits the responsibility for this effective protection of the wall base to be laid on these ingenious rulers from the north. Such revetments as these have been uncovered in Taanach,²⁵ Shechem,²⁶ Jericho,²⁷ Tell el-Hesi (perhaps the Biblical Eglon),²⁸ Debir,²⁹ Jerusalem,³⁰ and Keisan, just north of Haifa.³¹ In each case the pottery found indicates Hyksos occupancy.

What might constitute a combination of both types is seen in such places as Megiddo,³² Tell ed-Duweir,³³ Tell el-Ajjul,³⁴ or Tell Fara, which Petrie calls Beth Pelet.³⁵ Because of its strategic location a natural hill was often chosen as a site to be fortified. In such places a fosse was usually thrown around the base of the hill and the side of the tell was stoned up and plastered to form a glacis. Sometimes, as at Tell Fara, the natural slope of the tell was further enhanced by a rampart built on the brow of the hill. Sometimes, as at Jericho,³⁶ the size of the city was increased, in this case enclosing the bountiful spring Ain Sultan within the fortifications.

The Hyksos recognized the gate as a weak point in the city fortification, and so it is interesting to see the methods of construction evolve from a simple gateway to masked entrances that would prohibit engines of war being so

effectively used, and triple openings, where in case of need additional solid doors could be secured in position. While the southern and western gates to the Jebusite city on Ophel were both simple entrances,³⁷ the latter was protected on the outside by a narrow ledge of rock serving as an approach ramp, and on entering one faced an escarpment higher than one's head, which had to be circumvented before entering the town. In Tell el-Yehudiyeh a ramp mounting over the earthworks was protected on either side by great bastions, virtually turning it into a sunken causeway thirty-five feet wide.³⁸ At Debir the east gate appeared to have been placed in a tower, and the road to it was protected on either side by a bastion, making approach impossible except along a prescribed area.³⁹ The same general idea of an elevated terrace to protect the entrance is also seen at Hazor.⁴⁰ At Shechem the northwest entrance, belonging probably to the last of this period is a triple gateway which opens on the palace-temple area, and is similar in principle to the east gate of Qatna.⁴¹ In the recesses between the doors there was room for seats or guard chambers. While the west gate of the Jebusite city was protected on the inside, there was found at Alisar in Anatolia a simple gateway having a screen wall directly in front of the towers that compelled those entering to approach with the right side toward the wall, thus exposing the unprotected side to the watchers above.⁴²

As the city area became necessarily larger, it was only natural to find a specially fortified area within called the acropolis. Remains of such citadels have been found at Carchemish⁴³

²⁵ E. Sellin, *Tell Taannek* (Wien: Carl Gerold, 1904), p. 100.

²⁶ Albright, "Archaeological News of 1928," *AJA*, XXXIII (1929), 139.

²⁷ Garstang, "The Walls of Jericho," *PEFQS* (1931), pp. 187-190.

²⁸ F. J. Bliss, *A Mound of Many Cities* (London: PEF Committee, 1898), p. 18.

²⁹ Albright, "The Fourth Joint Campaign of Excavation at Tell Beit Mirsim," *BASOR*, No. 47 (1932), pp. 8 f.; *ZAW*, XLVII (1929), 6 f.

³⁰ Duncan, "Third Quarterly Report on the Excavation of the Eastern Hill of Jerusalem," *PEFQS* (1924), p. 125.

³¹ A. Rowe, "Excavations in Palestine 1934-35, Tell Keisan," *QDAP*, V (1936), 208.

³² Schumacher, *op. cit.*, pp. 23-26.

³³ Starkey, "Excavations at Tell ed-Duweir," *PEFQS* (1934), pp. 164-175.

³⁴ Petrie, *Ancient Gaza*, II, 1-3, pl. LI.

³⁵ Petrie, *Beth Pelet I (Tell Fara)* (London: British School of Archaeology in Egypt, 1930), pp. 15-17, pls. LI-LII.

³⁶ Garstang, "The Walls of Jericho," *PEFQS* (1931), p. 188.

³⁷ J. W. Crowfoot, "Excavations on Ophel, 1928," *PEFQS* (1929), pp. 150-152. Little wonder that David found this "upper city" impregnable.

³⁸ Petrie, *Hyksos and Israelite Cities*, pp. 2-9.

³⁹ Kyle, *Excavating Kirjath-sepher's Ten Cities*, pp. 76, 112.

⁴⁰ Garstang, "The Site of Hazor," *AAA*, XIV (1927), 36.

⁴¹ du Buisson, "L'ancienne Qatna," *Syria*, VIII (1927), 280-281.

⁴² H. H. von der Osten, *Discoveries in Anatolia* ("Oriental Institute Communications"; No. 14 [Chicago: University of Chicago Press, 1933]), pp. 40-44.

⁴³ Woolley and Lawrence, *Carchemish*, II, 41-47.

and Hazor⁴⁴ and possibly what Josephus speaks of as the "upper city"⁴⁵ at Ophel, the south-eastern hill of Jerusalem.⁴⁶ More complete excavation will undoubtedly reveal Hyksos citadels in other Palestinian strongholds for this feature of civic planning was soon destined to become an integral part of the fortifications.

Again, in the providing of an adequate water supply, the Hyksos showed their originality and enterprise. The Jebusites, for example, worked out a tunnel labyrinth reaching from within the walls to the Gihon spring some one-hundred fifty feet below the town,⁴⁷ while at Gaza large wells were constructed going down about seventy feet to living water.⁴⁸ At Jericho the spring was placed well within the city fortifications, providing an abundant supply for the inhabitants and making it impossible for an enemy to use the water. So from the Euphrates to the Nile, the Hyksos, in their power of adaptation, in their ingenious methods of construction, and well-thought-out civic plans, showed a largeness of vision that, coupled with the disintegrated conditions in Egypt, made them the masters for generations of this national corridor.

Between the expulsion of the Hyksos from Egypt and the advent of the Hebrews in Canaan⁴⁹ Egypt did not seek to develop the potential wealth of Palestine, preferring to keep this corridor as a buffer state between her and the east, and to consume what revenue she could wring from her vassals. There was a

unity of power and government during the Hyksos supremacy that was concretely expressed in the unity of design in fortifications, but a study of the excavated sites belonging to this period of Egyptian overlordship shows no such unity, but, on the contrary, a very definite disorganization, and a dependence placed in some outside controlling power. Gaza was almost abandoned.⁵⁰ Tell ed-Duweir, twenty-five miles inland, flourished to such an extent that the town overflowed the Hyksos fortifications and suburbs were built up. Perhaps Egypt put the inhabitants of both cities under the leadership of one prince, allowing them to repair the ramparts only to the extent necessary for local protection.⁵¹ Some cities, as Tell es-Safi for instance, were unwallled,⁵² while other places like Tell el-Hesi,⁵³ Beth-shan,⁵⁴ or Megiddo,⁵⁵ reveal large complexes that could be military storehouses or residences of vassal kings. Doubtless the king had a palace or combined residence and strong tower, from which his mercenaries could control any local uprising; anything more serious would have been referred to the authorities in Egypt.

Other cities were definitely fortified, as for example, Beth Shemesh, where the walls were strengthened by large towers or bastions,⁵⁶ or Debir, where the revetment of the Hyksos city, weakened in the destruction wrought by Pharaoh, was merely repaired by the addition of an eight-foot wall inside the revetment.⁵⁷ In Jericho, for the first time in the history of Palestine, clear indication is found of a city having a double wall as its outer fortification. The exterior wall was about six feet thick, while the

⁴⁴ Garstang, "The Site of Hazor," *AAA*, XIV (1927), 35-39.

⁴⁵ Josephus *Ant.* v. 2. 2.

⁴⁶ Map Supplement to *AnPEF*, IV (1923-25).

⁴⁷ E. W. G. Masterman, "The Ophel Hill," *PEFQS* (1923), pp. 40-41.

⁴⁸ Petrie, *Ancient Gaza*, IV, 2-3, pl. LXIII.

⁴⁹ Hall, in company with Hommel and others, places the Exodus as early as the expulsion of the Hyksos in the beginning of the XVIII Dynasty. H. R. Hall, *Ancient History of the Near East* (7th ed.; London: Methuen & Co., 1927), pp. 403-409. Garstang, after examining Jericho, feels certain of a date c. 1400 for the entry into Canaan. Garstang, *Joshua and Judges*, p. 147; *PEFQS* (1932), p. 150. Albright suggests a date of 1290 for the entry. Albright, *Recent Discoveries in Bible Lands* (New York: Funk & Wagnalls, 1936), p. 30. Petrie gives some nine reasons for thinking the entry should be as late as 1186. Petrie, *Palestine and Israel* (London: Society for Promoting Christian Knowledge, 1934), pp. 54-58.

⁵⁰ Albright, "Excavations in Palestine" *AJA*, XXVIII (1934), 194.

⁵¹ Starkey, "Excavations at Tell ed-Duweir," *PEFQS* (1934), pp. 164-175.

⁵² Bliss and Macalister, *Excavations in Palestine, 1898-1900* (London: PEF Committee, 1902), pp. 28-35.

⁵³ Petrie, *Tell el-Hesi* (London: Watt, 1891), p. 13.

⁵⁴ A. Rowe, "The Palestine Expedition, 1928 Season," *MJ*, XX (1929), 46 f.

⁵⁵ Schumacher, *op. cit.*, Ia, 37-43.

⁵⁶ D. Mackenzie, "Excavations at Ain Shems," *AnPEF*, I (1911), 86.

⁵⁷ Albright, *The Archaeology of Palestine and the Bible* (3d ed.; New York: F. H. Revell, 1935), p. 92.

inner one, some fifteen feet away, was twice as thick and probably much higher.⁵⁸ Two large towers, and a migdol in the northwest corner of the city, were salient features of the fortification.

In making a general comparison of town sites of this period, one cannot help being impressed with the difference between the fortifications in Palestine and those in nations to the north. The Hittites, for example, were, during this period, strongly entrenched in Anatolia. Their capital Boghaz Keui, was centrally located on one of the affluents of the Halys and was in the height of its prosperity about the fifteenth century.⁵⁹ The city occupied the circuitous crests of precipitous hills overlooking the wadies, and was almost half a square mile in area. Nothing is seen in Palestine that can begin to compare with its impregnability and size. Its inaccessible fortresses, its double walls and posterns, and its massive gate towers guarding the ramps approaching the entrances, indicate its builders were generations in advance of their time.

The city water supply at this time depended on cisterns, as in Debir;⁶⁰ or springs, as in Khirbet Belameh (Ibleam),⁶¹ and Megiddo;⁶² or wells, as in Beth Shemesh.⁶³ The spring at Ibleam was reached by a rock hewn tunnel while at Megiddo, an artificial subway pierced the town wall and emerged from the hill near the cave entrance which was well guarded.

Harmonizing with the statements found on the commercial tablets of this period,⁶⁴ all this variety of plan and construction reflects the existence of a polyglot of nations in Palestine that lacked the national organization afforded by

the Hyksos. The silos, storage rooms, and vast numbers of storage jar sherds found, indicate the correctness of the Biblical writer's statement when he said the spies returned reporting this land to be a country of potential wealth, but there was a vast difference between Palestine under the Hyksos who were developing it as their own empire, and under the Egyptians who wished to hold it only as a buffer state and to consume its revenue themselves.

The migratory waves and international disturbances from the close of the Late Bronze Age on kept each nation in the Near East battling for life and produced new and acute problems of adjustment and relationship. Increased population brought increased trade. Greed, and the jealous pride of growing nations, caused them to campaign for wealth and extended power. It was natural that this should express itself in terms of brick and mortar, in clever schemes of fortification and in impregnable fortresses that reflected the spirit of the builders.

The results of excavation in the various cities of this Hebrew period impress one with the evident differences in the amount and manner of fortification. Biblical citations, however,⁶⁵ intimate that Solomon instituted a plan whereby cities were graded according to their military importance, and archaeological finds have shown that some such plan continued through the days of the divided monarchy. With this in mind the apparent variation at once becomes a good illustration of an imperial organization whereby the resources of the country were commandeered to properly fortify approaches to the capital city, money being spent conservatively on the military centers according to their rank, but lavished on the residence of the king. The most northern city mentioned in this list in I Kings 9: 15-18, is Hazor which guarded the great road from Egypt to Damascus, and as a border town was

⁵⁸ Garstang, "Sir C. Marston's Expedition of 1930," *PEFQS* (1930), pp. 123-132; "Jericho, City of Necropolis," *AAA*, XXI (1934), 132.

⁵⁹ Garstang, *The Hittite Empire* (London: Constable & Co., 1929), p. 95.

⁶⁰ Kyle, *op. cit.*, p. 74.

⁶¹ W. J. Phythian-Adams, "The Site of Ibleam," *PEFQS* (1922), pp. 142-147.

⁶² R. S. Lamon, *The Megiddo Water System* ("Oriental Institute Publications"; XXXII [Chicago: University of Chicago Press, 1935]), pp. 1-37.

⁶³ Mackenzie, *op. cit.*, II (1912-13), 17, pl. I.

⁶⁴ F. Hrozný in E. Sellin, *op. cit.*, pp. 113-121.

⁶⁵ I Kings 9: 15-18.

probably fortified in a strong but not ornate fashion, as indicated by the stone fortifications dating to Solomon's time.⁶⁶ Megiddo controlled the pass from the coastal plain of Esdraelon. The thick outer wall, at places buttressed on the inside, and at other places supported by an inner wall separated from it by a narrow intramural space, the quarters for soldiers, the stables for horses, the large storage halls, and the water tunnel, all testify to the fitness of the city to perform its task of being a deterrent to hostile forces and of collecting custom from caravans.⁶⁷ In all probability the great road also passed through Gezer which Pharaoh gave his daughter, Solomon's wife, as a wedding present.⁶⁸ Here excavation reveals the addition to the Canaanite walls of numerous towers, not bonded to the wall, of the same superior masonry that characterized the buildings at Megiddo.⁶⁹

Beth-horon and Baalath evidently guarded the wadies leading toward Jerusalem from the great road. Tamar⁷⁰ is thought to be the modern el-Kurnub south of Hebron, guarding the road through the Arabah to Edom and Akabah. Perhaps this was a border fortress similar to that found by Woolley at Ain el-Guderat, which scholars think is the site of ancient Kadesh Barnea,⁷¹ or to another that Bliss excavated at Zakariya. If Albright's idea that the fortifications found at Gibeah (Tell el-Ful) are only the southwest corner of a larger citadel occupied by Saul⁷² should prove to be correct, it would be quite similar in plan to both of the fortresses just mentioned, and to one found by Woolley at Qasr er-Ruheibeh (Anci-

ent Rehoboth),⁷³ and to another discovered by Glueck in his recent explorations in Moab at Rujm el-Heri, some ten miles northwest of Madeba.⁷⁴ Protected in most cases by double walls and strong towers these fortresses became formidable guardians of the highways.

Later, probably in the days of the divided monarchy, when Judah had to protect her shrinking domain, cities like Mizpah,⁷⁵ guarding the northern approach to Jerusalem, or Lachish, protecting the Shephelah from attacks from the south, took the place of heavily fortified outposts in the days of Solomon. Tell en-Nasbeh, which most scholars now recognize as Mizpah, has furnished the most complete example of Iron Age fortifications yet found in Palestine. Surrounded by a double wall, the outside one being twenty-six feet thick in places and strengthened by huge towers of salient construction, protected at the base by a stone revetment smoothly plastered to form a glacis, and possessing a unique type of fortified entrance, this site illustrates the care lavished upon Judah's cities of second rank.⁷⁶ Lachish was also protected by a double wall erected over the old Hyksos revetment as a foundation and properly buttressed and paneled to make it almost impregnable. Biblical citations indicate that Rehoboam fortified it along with many other cities in Judah,⁷⁷ that some ten years after the destruction of Samaria, Sennacherib threatened a like fate to Lachish only to have Hezekiah pay the required tribute,⁷⁸ and that finally Nebuchadnezzar destroyed it along with Jerusalem in the sixth century.⁷⁹

In the national organization of cities according to Solomon's plan there were, beside

⁶⁶ Garstang, "The Site of Hazor," *AAA*, XIV (1927), pp. 36-39.

⁶⁷ P. L. O. Guy, *Excavations at Megiddo* ("Oriental Institute Communications"; No. 9 [Chicago: University of Chicago Press, 1931]), pp. 29 f., fig. 14; Lamon, *op. cit.*, pp. 1-37.

⁶⁸ I Kings 3:1.

⁶⁹ Macalister, *Excavation of Gezer*, I, 244-255.

⁷⁰ G. A. Smith, *Jerusalem from the Earliest Times to A. D. 70* (2 vols.; London: Hodder & Stoughton, 1907), p. 55.

⁷¹ Duncan, *Digging Up Biblical History*, I, 227 f.

⁷² Albright, "A New Campaign of Excavation at Gibeah of Saul," *BASOR*, No. 52 (1933), pp. 6-12.

⁷³ Woolley and Lawrence, *The Wilderness of Zin*, Vol. III of *AmPEF* (1914-15), p. 41.

⁷⁴ Glueck, "Explorations in Eastern Palestine II," *AASOR*, XV (1935), 110, pl. XXI.

⁷⁵ I Kings 15:22.

⁷⁶ W. F. Bade, *Excavations at Tell en-Nasbeh* (Palestine Institute Publications); No. 1 [Berkeley: Palestine Institute, 1928], pp. 15-30.

⁷⁷ II Chron. 11: 5-9.

⁷⁸ II Kings 18: 14.

⁷⁹ Jer. 34: 7.

these military centers, storage cities⁸⁰ where supplies for the king and his household were kept under the supervision of royal officials.⁸¹ A large number of grain pits found in Debir suggests the likelihood of its being a storage city as well as a "book town." Perhaps also such a storage city was Tell el-Hesi, where in successive strata complexes resembling migdols or official residences were found. In the days of the Judges there was a migdol in Shechem, evidently near the temple and also the northwest gate, as has been verified by excavation.⁸² In Thebez, northeast of Shechem, the people fled into one such tower as a place of refuge from Abimelech.⁸³ Uzziah is spoken of as building migdols in the wilderness.⁸⁴ Such a migdol, dated to the ninth century, was found in Gibeah in the stratum above the fortress attributed to the time of Saul.⁸⁵ It was evidently similar in general design to that shown on the Karnak reliefs of Sethos I.⁸⁶ Surrounded on all sides by a glacis supported by a heavy double-faced wall filled with earth, such a tower whether small or large could afford real protection to those within. These retreats were common in the smaller towns, replacing the larger city acropolis, and seemed to play an important part in the defense system.

Shechem shows signs of having been rebuilt during this period, but it soon relinquished the place of importance it had enjoyed for centuries in favor of Samaria, the capital of the northern kingdom, located only a few miles to the west. No city remains previous to this Hebrew period were found confirming the Biblical statement that Omri was the purchaser of the site and first builder of the city.⁸⁷ Little remains, however, of his fortifications, the walls and gates of succeeding strata having

replaced them. These few surviving traces, however, such as the footing trenches cut in the solid rock, and the few stones of the wall still in situ, indicate that much time and money was lavished on Jerusalem's rival city.

By combining the results of the piecemeal excavations carried on at Jerusalem in such places as are not inaccessible because of modern buildings or tombs, a fairly accurate story of its past history may be obtained. Probably the city that David took from the Jebusites and refortified, occupied the eastern hill now known as Ophel, and possessed at least three and possibly four gates well protected by towers.⁸⁸ While David used the threshing floor of Araunah as an altar,⁸⁹ there is no record of his having fortified that area. This seems to have been the work of Solomon who built "the wall of Jerusalem round about."⁹⁰ Recent excavations carried on at the citadel⁹¹ have brought to light certain bits of masonry dating back to Solomon's day that were quite similar to the masonry in the lower Bliss wall,⁹² which rather throws the weight of evidence toward thinking the south wall of the city then ran southeast from the southern slope of the western hill, parallel to the axis of the Hinnom valley, and crossed the Tyropean to a point *below* the pool of Siloam. Thus it would be safe to say that in this period of Israel's history at least a major portion of what is now the temple area, the western hill, the Tyropean valley, and the hill of Ophel, were enclosed within the walls. Biblical citations make it clear that these walls suffered much during the years of the divided monarchy prior to Nebuchadnezzar's conquest.⁹³

⁸⁰ I Kings 9:19; II Chron. 8:6.

⁸¹ II Chron. 11:11.

⁸² Judges 9:46-49.

⁸³ Judges 9:51-53.

⁸⁴ II Chron. 26:10.

⁸⁵ Albright, "Excavations at Gibeah of Benjamin," *AASOR*, IV (1922-23), 52.

⁸⁶ Gardiner, "The Ancient Military Road Between Egypt and Palestine," *JEA*, VI (1920), 99-102, pl. XII.

⁸⁷ I Kings 16:24.

⁸⁸ Compare Josephus *Ant.* III, 1, 2, with II Sam. 5:9, and II Chron. 32:30, with the fact that no sherds earlier than Israelite have been found on the western hill.

⁸⁹ II Sam. 24:16-24.

⁹⁰ I Kings 3:1.

⁹¹ C. N. Johns, "Excavations at the Citadel, Jerusalem," *QDAP* (1936), pp. 127-133.

⁹² See Bliss and Dickie *Excavations at Jerusalem, 1894-1897* (London: PEF Committee, 1898), Pocket Map.

⁹³ II Chron. 12:2-9; II Kings 14:13; II Chron. 26:9; 27:3; 32:5; Isa. 22:10; II Chron. 33:14; II Kings 25:4, 10; Neh. 1:3; 2:14.

The Israelites appear to have been a nation alert enough to study the plans of defense of their neighbors and to adapt them to the better protection of their own country. They did not seem satisfied to be mere copyists, but worked out improvements that would make their walls and gates just a bit better than others. For example, they could copy the direct triple entrance of Carchemish⁹⁴ at Megiddo, and improve it by putting a fortified court in front of the gateway.⁹⁵ Again they did not have the canals that Babylon used so effectively to protect her double walls and entrances,⁹⁶ but the sloping mountain side before the double walls of Lachish restrained hostile forces in as efficient a manner.⁹⁷ The canals could be emptied of their water, but the mountain could not be deprived of its slope. The Babylonian drawbridge was displaced by an approaching ramp where many a warrior paid the price of a side exposed to the towering battlements. The double set of gates at Babylon was, in principle, strengthened at Lachish by making the intramural space a ramp, strongly fortified. Or again, they could take a double gate at Alisar⁹⁸ with its recessed front entrance and exposed towers, and change it to a double entrance at Mizpah, overlapping the walls in such a way that less tower space was exposed to the enemy's attack, and a larger entrance recess was

provided. Or again, they had the ability to rework a plan such as is found in the Canaanite east gate of Debir, and increase its efficiency by changing it from a direct to an indirect entrance.⁹⁹

While in this period the discovery of horned altars, or clay incense burners, vases, and figurines, or proto-Ionic capitals¹⁰⁰ as well as the description of the temple objects at Jerusalem¹⁰¹ indicate a limited use of sculptural detail, yet the profusion of relief glorifying the gods or the king, such as is seen on the walls and gates of most of the cities outside Palestine is noticeably absent from the fortifications of the Hebrews. Perhaps this may reflect the efforts of what May calls an "idealistically-minded minority" to take certain cultural patterns from the groups around them and, accepting or rejecting certain parts, remotivate the result for use in their own peculiar culture or philosophy of life.

⁹⁴ Woolley and Lawrence, *Carchemish*, pp. 74-75, pl. XII.

⁹⁵ Guy, *op. cit.*, pp. 24-27.

⁹⁶ E. Unger, *Babylon, die heilige Stadt* (Berlin: De Gruyter, 1931), pl. X.

⁹⁷ Starkey, "Tell Duweir," *PEFQS* (1933), pp. 197-198.

⁹⁸ von der Osten, *op. cit.*, pp. 9-21.

⁹⁹ Albright, *The Archaeology of Palestine and the Bible*, pp. 117-119.

¹⁰⁰ H. G. May and R. M. Engberg, *Material Remains of the Megiddo Cult* ("Oriental Institute Publications"; XXVI [Chicago: University of Chicago Press, 1935]), pp. 4-42.

¹⁰¹ I Kings 6: 23-30; 7: 15-45.

